L 338

ORDER NO. ARD-7807044C

2886

Service Manual

8-Track Tape Deck

RS-808

8-Track Stereo Recording/Playback Cartridge Deck
with Led Program Indicators

This is the Service Manual of Model RS-808 for PX.

RQ-833 MECHANISM SERIES

Specifications (Catalog specifications for sales)

Power requirement:	AC; 110/125/220/240 V, 50/60 Hz preset Power voltage; 220 V for Europe 125 V for Asia Power consumption; 24 W
Motor:	DC motor
Track system:	8-track 2-channel stereo recording and playback
Tape speed:	9.5 cm/s, (3-3/4 ips.)
Wow and flutter:	0.12% (WRMS)
Frequency response:	50 ~ 13,000 Hz
Signal-to-noise ratio:	45 dB
Fast forward time:	Approx. 480 seconds with 300 feet tape
Input:	MIC; sensitivity 0.2 mV, applicable microphone impedance 600Ω ~ 20 KΩ LINE; sensitivity 60 mV, input impedance 150 KΩ
Output:	LINE; output level 0.5 V, load impedance 50 KΩ over HEADPHONE; output level 60 mV, impedance 8Ω
Head:	3 in 1 head
Dimensions:	36.0 cm(W) × 13.6 cm(H) × 25.1 cm (D) [14-1/4"(W) × 5-3/8"(H) × 9-7/8"(D)]
Weight:	3.9 kg (8 lbs. 10 oz)

Specifications are subject to change without notice.

Panasonic®

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LOCATION OF CONTROLS AND COMPONENTS

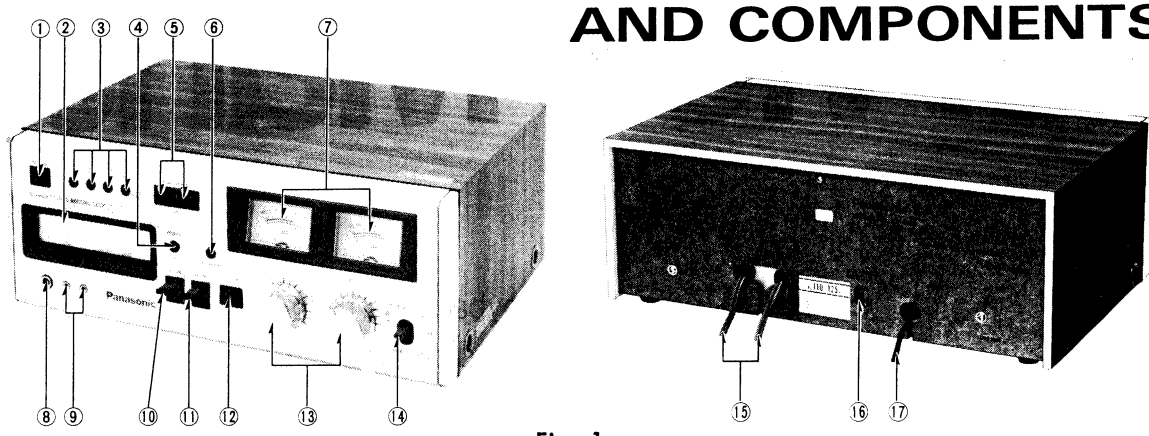


Fig. 1

① Program selector
② Cartridge slot
③ Program indicators
④ Record indicator
⑤ Time counter and reset button
⑥ Auto-stop indicator
⑦ Level meters
⑧ Headphones jack
⑨ Microphone jacks
⑩ Record button
⑪ Pause button
⑫ Fast forward button
⑬ Level adjustment controls
⑭ Mode selector
⑮ Connection cords
⑯ Voltage selector
⑰ Power cord

DISASSEMBLY INSTRUCTIONS

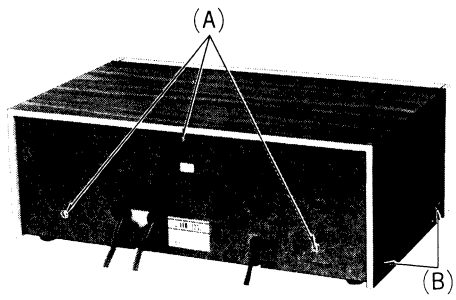


Fig. 2

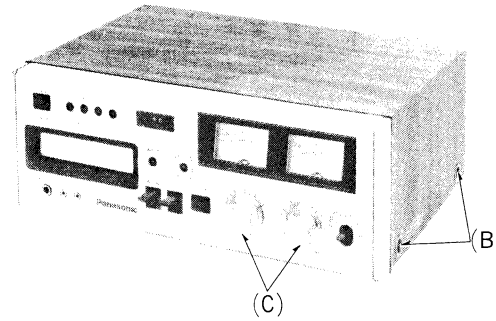


Fig. 3

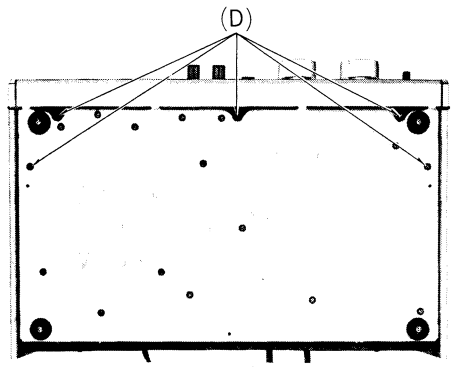


Fig. 4

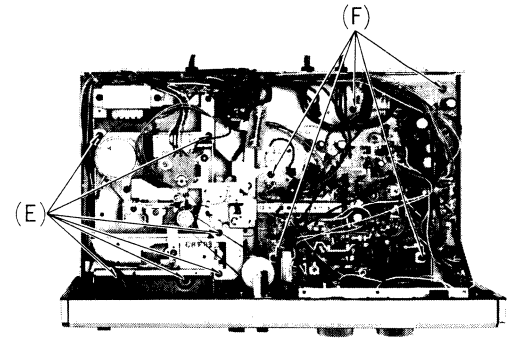
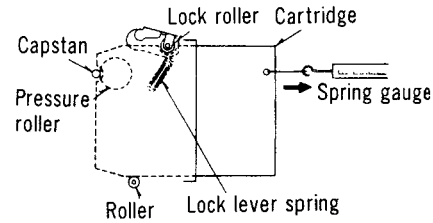
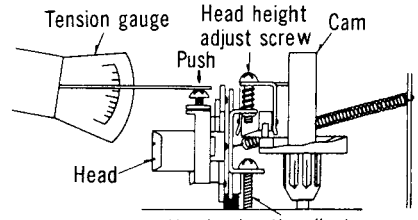
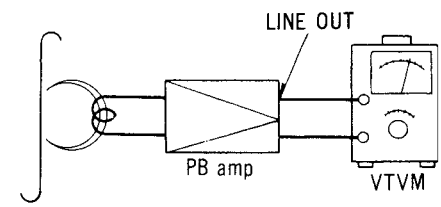
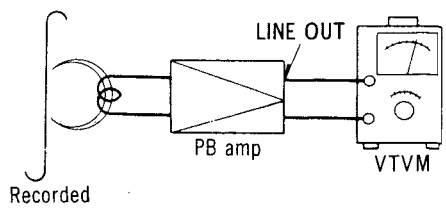
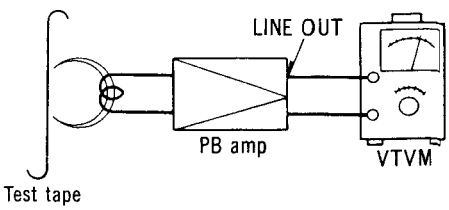
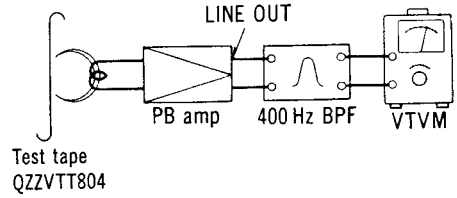
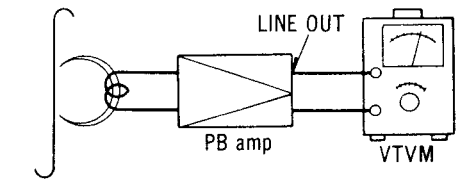
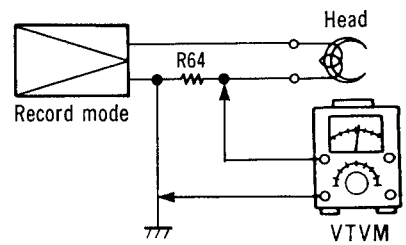


Fig. 5

Procedure	To remove ——.	Remove ——.	Shown in fig. ——.
1	Back board	•3 screws·····(A)	2
2	Main body case	•4 screws·····(B)	2, 3
3	Front panel	•2 volume knobs ·····(C) •5 red screws ·····(D)	3 4
4	Mechanism	•6 red screws ·····(E)	5
4	Main amplifier	•5 red screws ·····(F)	5

MEASUREMENTS AND ADJUSTMENTS

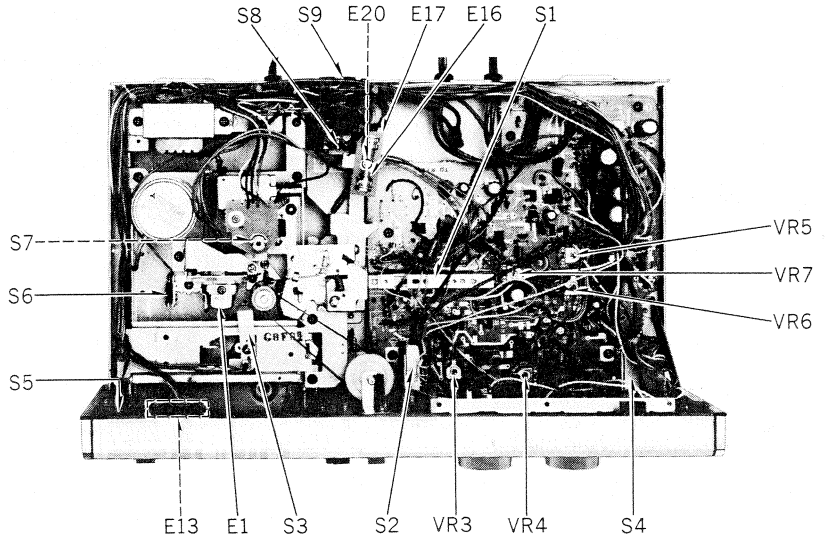
STEP	PROCEDURE	METHOD	MEASURING FIGURE
1	Pressure of pressure roller	Insert the standard cartridge in the cartridge slot and take the measurement by pulling it with the spring gauge. **Standard value: 500~800 gr**	 **Fig. 6**
2	Head-up tension	Place the set into the mode of program 1, and take the measurement by pushing the head downward with the tension gauge. **Standard value: 19 gr or more**	 **Fig. 7**
3	Head height rough adjustment	1. Connect the LINE OUT cords to the VTVM. 2. Place the set into the mode of program 1. 3. Play either a test tape QZZVTT804 or recorded music tape. 4. Turn head height adjustment screw counterclockwise to raise head to highest position. 5. Next, turn head height adjustment screw clockwise, gradually lowering head, and stopping where first sound heard is at maximum level.	 **Fig. 8** ※ Adjustment point (head height adjust screw) is shown in fig. 7 of step 2.
4	Head azimuth adjustment	1. Connect the LINE OUT cords to the VTVM. 2. Place the set into the mode of program 2. 3. Play the recorded music tape. 4. Adjust head azimuth screw for maximum.	 **Fig. 9** ※ Head azimuth screw is shown in fig. 7 of step 2.
5	Head height adjustment	1. Connect the LINE OUT cords to the VTVM. 2. Place the set into the mode of program 2. 3. Play the test tape QZZVTT801 and adjust head height adjustment screw for minimum output.	 **Fig. 10** ※ Head height screw is shown in fig. 7 of step 1.

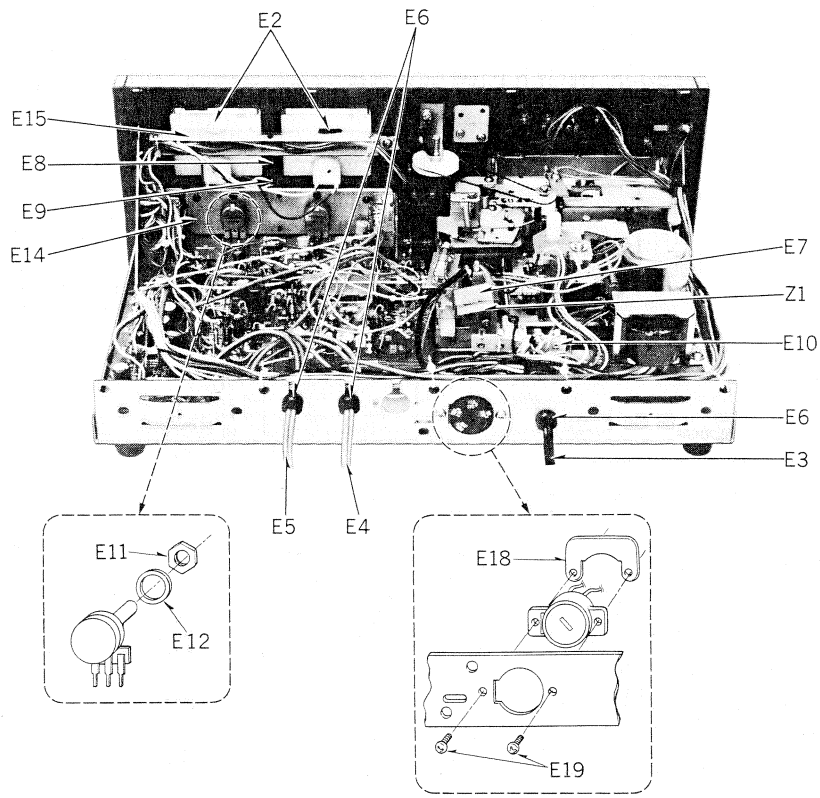
STEP	PROCEDURE	METHOD	MEASURING FIGURE
6	Crosstalk adjustment	1. Connect the LINE OUT cords to the VTVM. 2. Place the set into the mode of program 1. 3. Play the test tape QZZVTT804 and measure the output (original signal). 4. Changeover to program 2, play and measure the output (crosstalk signal). 5. Read the ratio between original signal and crosstalk signal in dB. 6. Adjustment should be repeated step 4, 5 and 6 above. **Standard value: 55 dB or more**	 **Fig. 11**
7	Playback gain adjustment	1. Connect the LINE OUT cords to the VTVM. 2. Play the test tape (QZZ8FC) and measure the output level on the VTVM. **Standard value: 0.6±0.1 V** 3. If measured value is not within standard, adjust VR3 (L-CH), VR4 (R-CH).	 **Fig. 12**
8	Level meter adjustment	1. Play the test tape (QZZ8FC). 2. Adjust VR5 (L-CH), VR6 (R-CH) so that the level meter indicates +2 dB.	
9	Erase current adjustment	1. Test equipment connection is shown in fig. 13. 2. Place the set into record mode. 3. Read voltage on VTVM and calculate erase current by following formula. Erase current (A) = $\frac{\text{Value read on VTVM (V)}}{10\Omega}$ **Standard value: 8±1 mA** 4. If measured value is not within standard, adjust VR7.	 **Fig. 13**

OTHER SPECIFICATIONS FOR REFERENCE

ITEM	SPECIFICATION	REMARKS
Wow and flutter	0.35% or less	(RMS)
Tape speed accuracy	±3% or less	———
Playback frequency response	500 Hz: 0±0 dB 100 Hz: −1±5 dB 7.5 kHz: −1±5 dB	———
Playback S/N ratio	40 dB or more	———
Bias oscillation frequency	40±5 kHz	———
Bias current	1.1±0.3 mA	Measure at R55 (L-CH), R56 (R-CH).
Standard recording level	MIC: −72±4 dB LINE IN: −24±4 dB	Recording current at R55, R56···48μA.

ELECTRICAL PARTS LOCATION



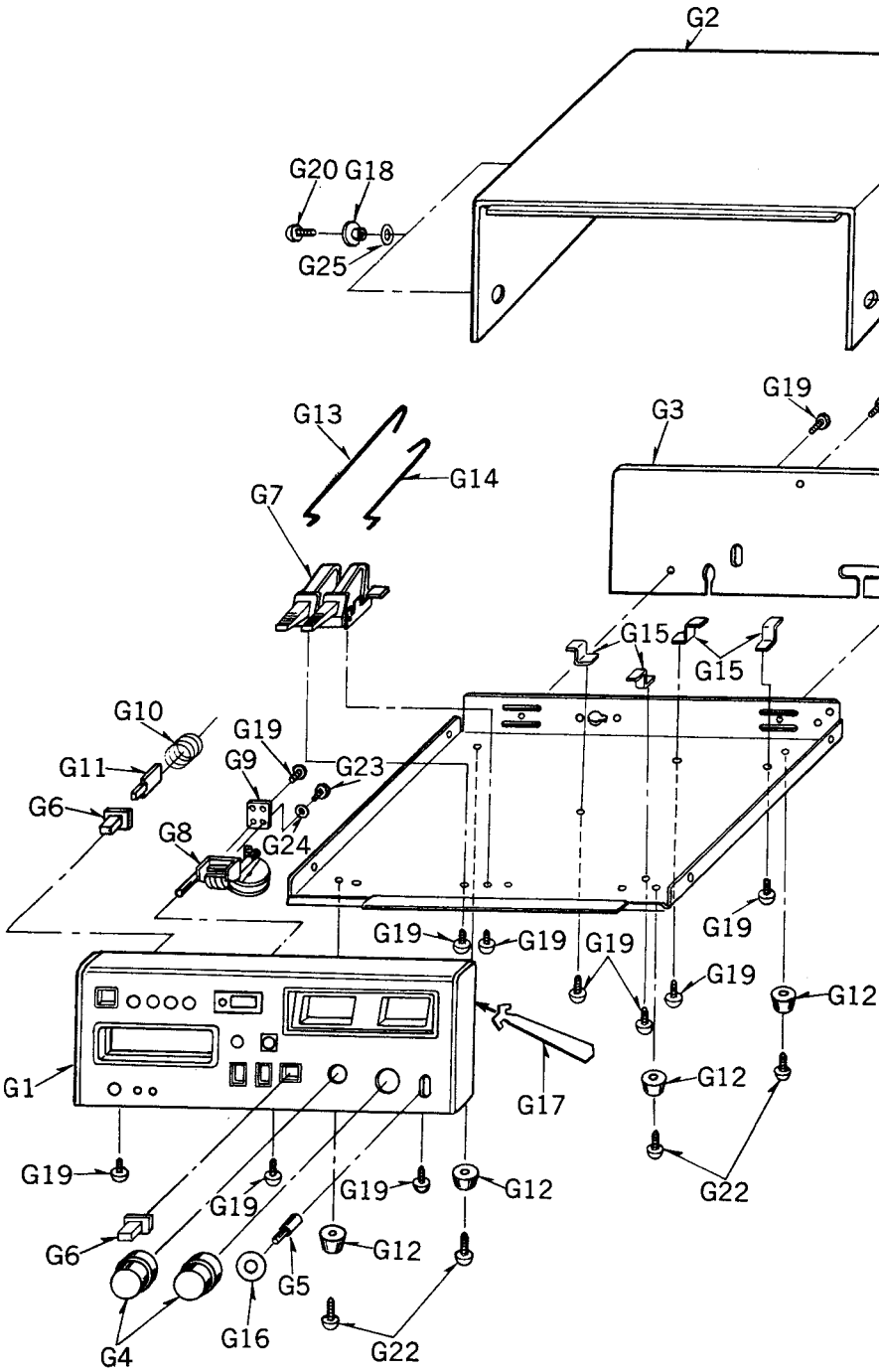


NOTE:
S indicates that only parts specified by the manufacturer be used for safety.

Ref. No.		Part No.	Part Name & Description
		ELECTRICAL PARTS	
E1		WY812A	Head
E2		QSL1098RNM	Level Meter
E3	S	QFC1203M	Power Cord
E4		QFC2116	Connection Cord (LINE IN)
E5		QFC2115	Connection Cord (LINE OUT)
E6		QTD1129	Cord Bushing
E7		QTW1118	Spark Killer Cover
E8	S	XAMQ23P300N	Pilot Lamp

Ref. No.		Part No.	Part Name & Description
E9		QBG1166	Lamp Cover
E10		QJT4009	4 Pin Terminal
E11		QNQ1004	Nut
E12		XWS8A	Washer
E13	S	QEJ0264HMA	Jack Board Unit
E14		QMA3363	Volume Angle
E15		QMA3365	Meter Angle
E16	S	XBAIE05NR3	Fuse
E17	S	QTF1032	Fuse Holder
E18		QMF1982	Voltage Selector Angle
E19		XTN3+10B	Screw ⊕3×10
E20		XTN3+8B	Screw ⊕3×8

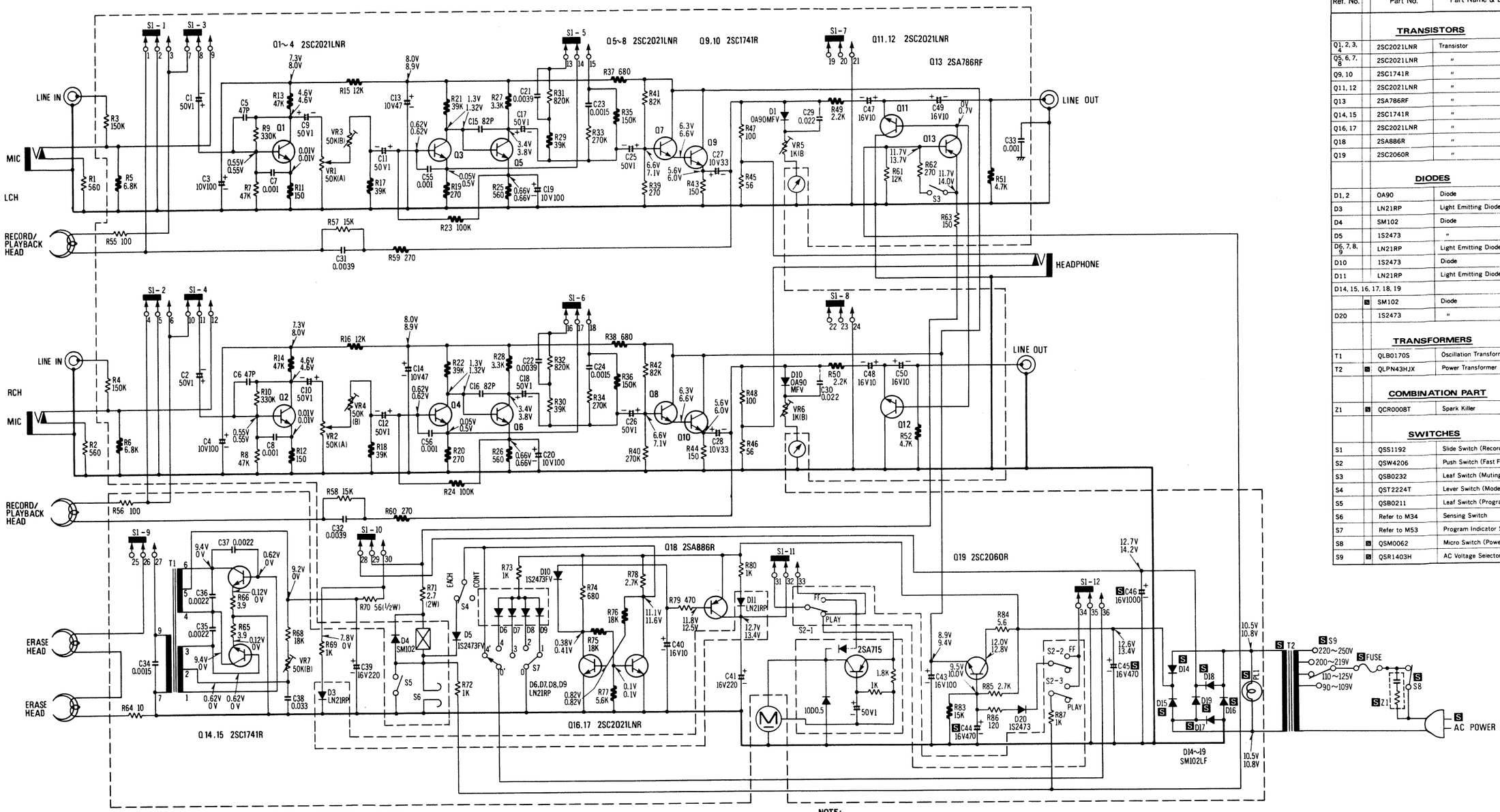
CABINET PARTS



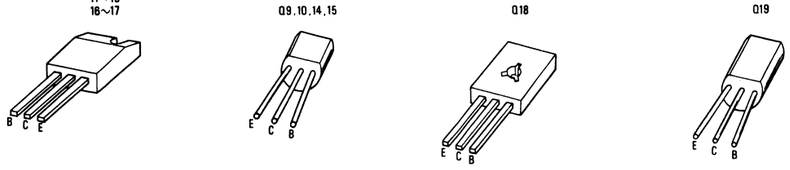
NOTE: S indicates that only parts specified by the manufacturer be used for safety.

Ref. No.		Part No.	Part Name & Description
		CABINET PARTS	
G1		QYP0746	Front Panel Assembly
G2		QKW1285	Main Body Case
G3		QKS1241	Back Board
G4		SBN752	Volume Knob
G5		QGT1394	Lever Knob
G6		QGO1431	Push Button
G7		QXB0554	Lever Knob Assembly
G8		QDC0098	Time Counter
G9		QMA3366	Counter Angle
G10		QBC1280	Cushion Spring
G11		QGO1432	Push Button Lever
G12		QKA1030	Rubber Foot
G13		QMR1674	Record Rod
G14		QMR1673	Pause Rod
G15		QMA3364	P.C.B. Holding Angle
G16		QBH0125	Spacer
G17		QMA3368	Panel Angle
G18		QWQ1131	Washer
G19		XTN3+8B	Tapping Screw ⊕3×8
G20		XTN4+10B	Tapping Screw ⊕4×10
G21		XMM31+1O	Screw ⊕3.1×10
G22		XTN3+40B	Tapping Screw ⊕3×40
G23		XSN3+8S	Screw ⊕3×8
G24		XWA3B	Spring Washer
G25		QBH0160	Washer
		ACCESSORIES	
A1	S	XBA1E05NR3	Spare Fuse
A2		QQT2287	Instruction Book
P1		QPN3701	Inside Carton
P2		QPA0394	Inner Cushion
P3		XZB40X60A02	Poly Bag

SCHEMATIC DIAGRAM MODEL RS-808



TERMINATIONS (BOTTOM VIEW)



NOTE:

1. S1-1 – S1-12 ····· Record/playback select switch (shown in playback position).
2. S2-1 – S2-3 ····· Fast forward ON/OFF switch (shown in OFF position).
3. S3 ····· Muting switch.
4. S4 ····· Mode select switch (shown in EACH STOP position).
5. S5 ····· Program select switch.
6. S6 ····· Sensing switch.
7. S7 ····· Program indication select switch (shown in PROGRAM 1 position).
8. S8 ····· Power ON/OFF switch.
9. VR1, 2 ····· Level control.
10. VR3, 4 ····· Gain adjustment VR.
11. VR5, 6 ····· Level meter adjustment VR.
12. VR7 ····· Erase current adjustment VR.
13. Resistor values are in ohms (Ω), 1/4 watt unless specified othewise.
    K = 1,000Ω.
    Resistors indicated thickly show printed type resistor.
14. Capacitor values are in microfarads (μF) unless specified otherwise.
    P = Pico-farads.
15. All voltage values show in circuitry are under no signal condition with volume control at minimum position.
    For measurement, use VTVM.
    The upper values should be measured during recording and the lower values during playback.

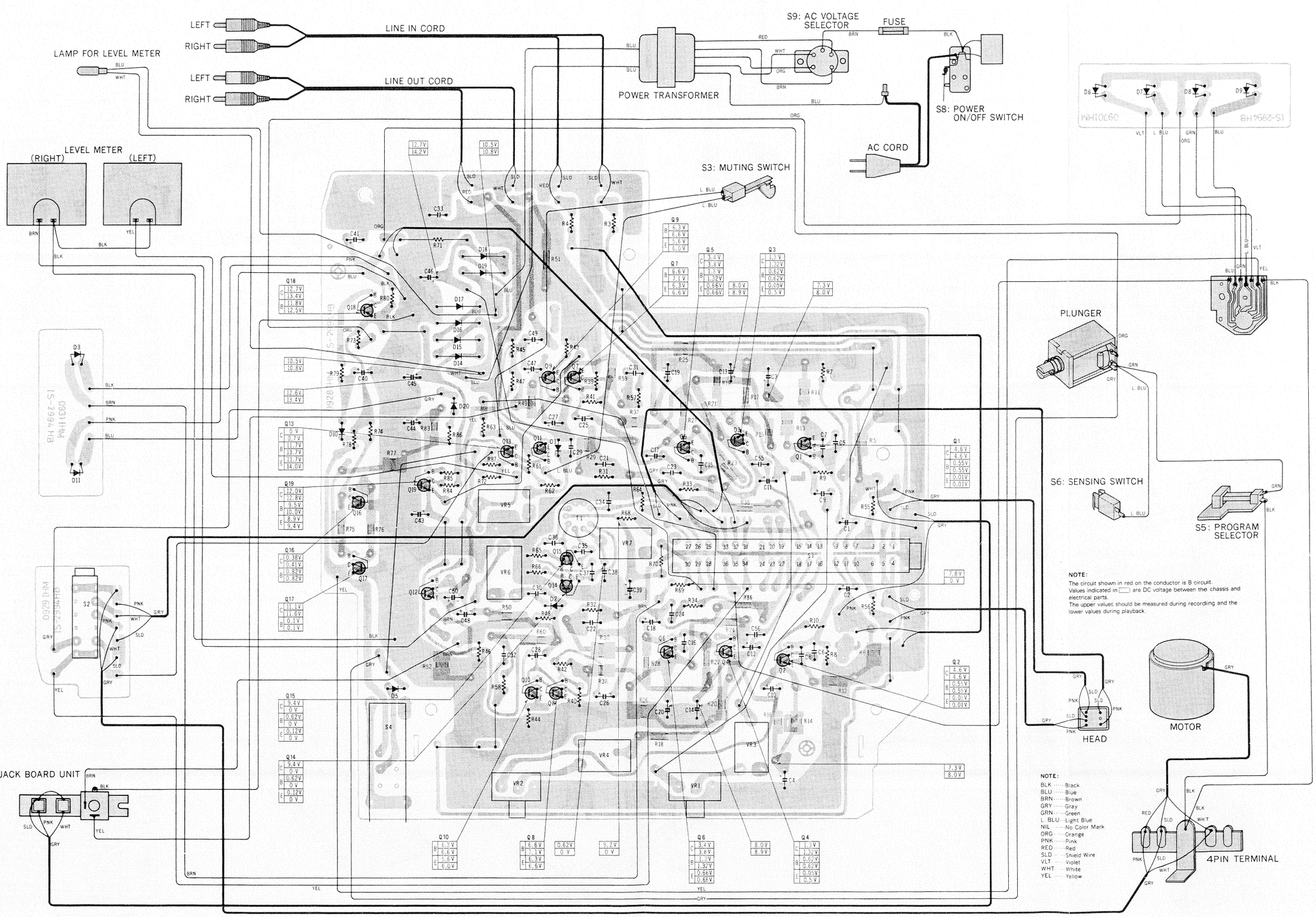
NOTE: ⓢ indicates that only parts specified by the manufacturer be used for safety.

Ref. No.		Part No.	Part Name & Description
		TRANSISTORS	
Q1, 2, 3, 4		2SC2021LNR	Transistor
Q5, 6, 7, 8		2SC2021LNR	〃
Q9, 10		2SC1741R	〃
Q11, 12		2SC2021LNR	〃
Q13		2SA786RF	〃
Q14, 15		2SC1741R	〃
Q16, 17		2SC2021LNR	〃
Q18		2SA886R	〃
Q19		2SC2060R	〃
		DIODES	
D1, 2		OA90	Diode
D3		LN21RP	Light Emitting Diode
D4		SM102	Diode
D5		1S2473	〃
D6, 7, 8, 9		LN21RP	Light Emitting Diode
D10		1S2473	Diode
D11		LN21RP	Light Emitting Diode
D14, 15, 16, 17, 18, 19			
	ⓢ	SM102	Diode
D20		1S2473	〃
		TRANSFORMERS	
T1		QLB0170S	Oscillation Transformer
T2	ⓢ	QLPN43HJX	Power Transformer
		COMBINATION PART	
Z1	ⓢ	QCR0008T	Spark Killer
		SWITCHES	
S1		QSS1192	Slide Switch (Record/Playback)
S2		QSW4206	Push Switch (Fast Forward ON/OFF)
S3		QSB0232	Leaf Switch (Muting)
S4		QST2224T	Lever Switch (Mode)
S5		QSB0211	Leaf Switch (Program Selector)
S6		Refer to M34	Sensing Switch
S7		Refer to M53	Program Indicator Selector
S8	ⓢ	QSM0062	Micro Switch (Power ON/OFF)
S9	ⓢ	QSR1403H	AC Voltage Selector

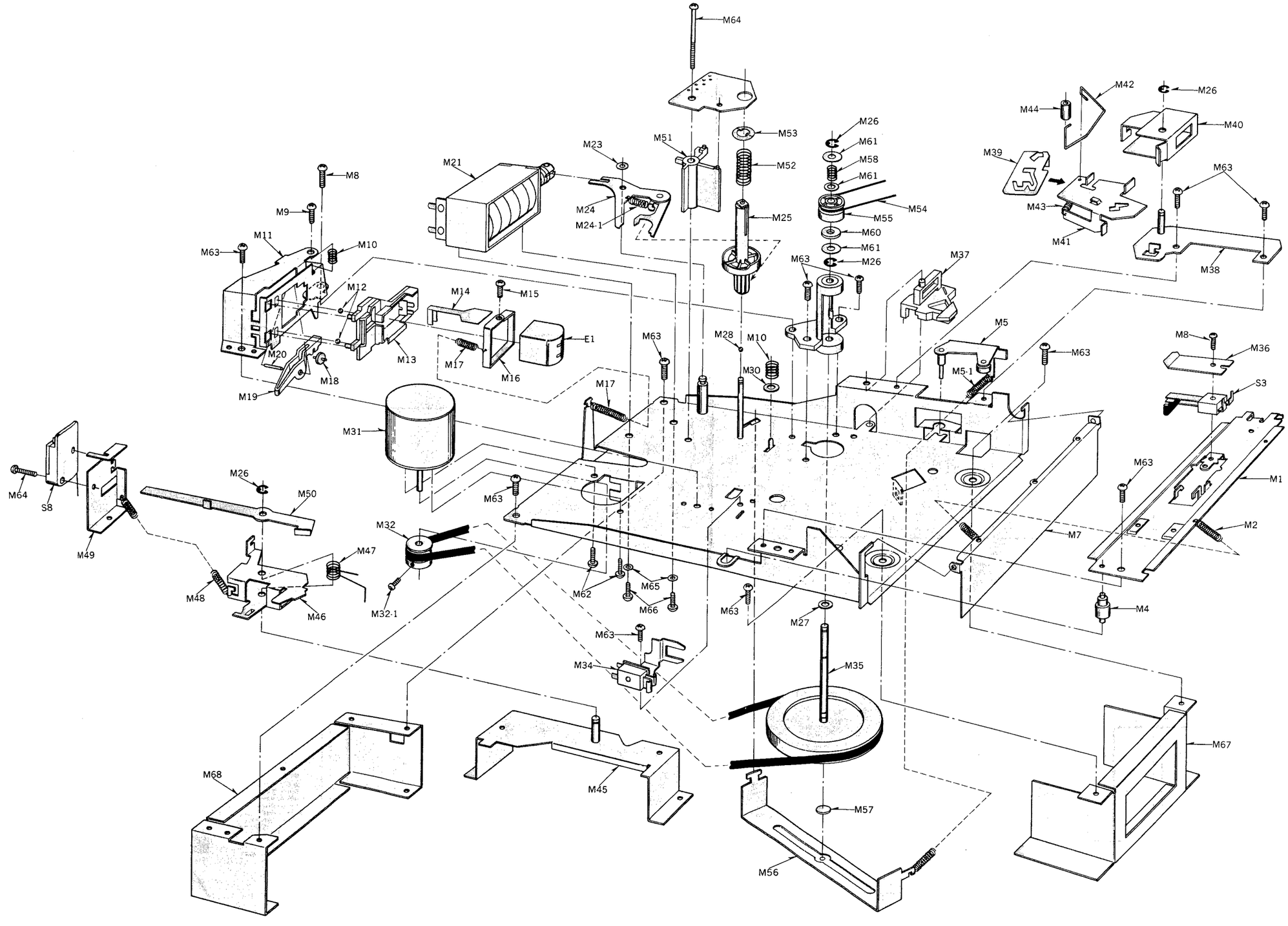
NOTE: RESITORS ERD ·····Carbon
ERG ·····Metal oxide
CAPACITORS ECEA ·····Electrolytic
ECCD ·····Ceramic
ECKD ·····Ceramic
ECQM·····Polyster
ECQS ·····Polystyrene

WIRING CONNECTION DIAGRAM MODEL RS-808

Ref. No.	Part No.
RESISTORS	
R1, 2	ERD25TJ561
R3, 4	ERD25TJ154
R7, 8	ERD25TJ473
R9, 10	ERD25TJ334
R31, 32	ERD25TJ824
R33, 34 39, 40	ERD25TJ274
R41, 42	ERD25TJ823
R43, 44	ERD25TJ151
R45, 46	ERD25TJ560
R47, 48 55, 56	ERD25TJ101
R57, 58	ERD25TJ153
R61	ERD25TJ123
R62	ERD25TJ271
R63	ERD25TJ151
R64	ERD25TJ100
R65, 66	ERD25TJ3R9
R68	ERD25TJ183
R69	ERD25TJ102
R70	ERG12ANJ560
R71	ERX2ANJ2R7
R72, 73	ERD25TJ102
R74	ERD25TJ681
R78	ERD25TJ272
R79	ERD25TJ471
R80	ERD25TJ102
R84	ERD25TJ5R6
R85	ERD25TJ272
R86	ERD25TJ121
R87	ERD25TJ102
VARIABLE RESISTORS	
VR1, 2	EVH3AA084A54
VR3, 4	EVLS3AA00B54
VR5, 6	EVLS3AA00B13
VR7	EVLS3AA00B54
CAPACITORS	
C1, 2	ECEA50V1
C3, 4	ECEA10V100
C5, 6	ECCD1H470K
C7, 8	ECKD1H102KB
C9, 10, 11, 12	ECEA50V1
C13, 14	ECEA16V47
C15, 16	ECCD1H820K
C17, 18	ECEA50V1
C19, 20	ECEA10V100
C21, 22	ECQM05392KZ
C23, 24	ECQM05152KZ
C25, 26	ECEA50V1
C27, 28	ECEA16V33
C29, 30	ECKD1H223ZF
C31, 32	ECQM05392KZ
C33	ECKD1H102ZF
C34	ECQM05152KZ
C35	ECKD1H222KB
C36	ECQM05223KZ
C37	ECKD1H222KB
C38	ECKD1H333ZF
C39	ECEA16V220
C40	ECEA16V10
C41	ECEA16V220
C43	ECEA16V100
C44, 45 S	ECEA16V470
C46 S	ECEA1CS102
C47, 48, 49, 50	ECEA16V10



EXPLODED VIEWS



Ref. No.	Part No.	Part Name & Description
		MECHANICAL PARTS
M1	QMA2820	Reinforcement Angle
M2	QBT1663	Lid Spring
M4	QDP1670	Guide Roller
M5	QXL1017	Lock Lever Assembly
M5-1	QBT1810	Lock Lever Spring
M7	QKF8001	Cartridge Lid
M8	XTN3+12B	Screw ⊕3×12
M9	QHQ1088	Screw for Head Height Adjustment
M10	QBC1166	Head Adjust Spring
M11	QMK1553	Head Base Plate
M12	QDK1012	Steel Ball 2.5ϕ
M13	QMZ1172	Head Supporter
M14	QMF1806	Clamper for Head Wire
M15	XSN3+8S	Screw ⊕3×8
M16	QMA2719	Head Bracket
M17	QBT1812	Head Pressure Spring
M18	QDP1671	Operation Roller
M19	QML2924	Operation Lever
M20	QMN2077	Operation Lever Spring
M21	QME0145	Plunger
M22	QBC1280	Plunger Spring
M23	QBW2046	Snap Washer
M24	QXR0233	Selector Assembly
M24-1	QBT1811	Selector Spring
M25	QMD0012	Cam
M26	XUC3FT	Stop Ring 3ϕ
M27	QBW2063	Washer
M28	QDK1003	Steel Ball 4ϕ
M29	QXM0136	Flywheel Metal
M30	QBK7123	Fiber Washer
M31	MMF3SF2AA	Motor
M32	QXP0571	Motor Pulley Assembly
M32-1	XSN2+5	Screw ⊕2×5
M33	QDB0141	Flywheel Belt
M34	QMA3160	Tape Guide with Sensing Switch
M35	QXF0135	Flywheel Assembly
M36	QMF1965	Switch Guarder
M37	QML3227	Detection Lever
M38	QXK2046	Pause Base Plate
M39	QML3299	Pause Lock Plate
M40	QML3300	Pause Lever-A
M41	QML3301	Pause Lever-B
M42	QBN1599	Pause Lock Spring
M43	QBT1845	Pause Spring
M44	QBG1275	Brake Rubber
M45	QXK2036	Record Angle
M46	QML3298	Record Lever
M47	QBN1600	Record Spring
M48	QBT1583	Record Lever Spring
M49	QMA3360	Switch Angle
M50	QML3297	Switch Lever
M51	QMZ1205	P.C.B. Holding Spacer
M52	QBC1305	Cushion Spring
M53	QBP1779	Program Indication Selector
M54	QDB0143	Counter Belt
M55	QDP1756	Capstan Pulley
M56	QMA2717	Flywheel Retainer
M57	QMM1339	Thrust
M58	QBC1314	Capstan Pulley Spring
M59	QBN1601	Detection Lever Spring
M60	QBF1121	Felt
M61	XWG4	Flat Washer
M62	XSN26+3	Screw ⊕2.6×3
M63	XTN3+8B	Tapping Screw ⊕3×8
M64	XTN3+40B	Tapping Screw ⊕3×40
M65	XWA3B	Spring Washer 3ϕ
M66	XSN3+5S	Screw ⊕3×5
M67	QMA3359	Mechanism Angle-A
M68	QMA3361	Mechanism Angle-B

F J Printed in Japan.